



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/580,019	10/31/2012	Stephan Frans Fok	BHD-4662-2327	4083

23117 7590 02/01/2017
NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

ADAMS, NATHANIEL L

ART UNIT	PAPER NUMBER
----------	--------------

3654

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

02/01/2017

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOMAIL@nixonvan.com
pair_nixon@firsttofile.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STEPHAN FRANS FOK and
PAULUS JOHANNES HYACINTHUS MARIE SMEETS

Appeal 2015-002301
Application 13/580,019
Technology Center 3600

Before: CHARLES N. GREENHUT, JEFFREY A. STEPHENS, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

GREENHUT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims
1–5 and 8–19. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

CLAIMED SUBJECT MATTER

The claims are directed to a method for winding and unwinding a synthetic rope on a winch drum and a winch assembly employing a control system for carrying out that method. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method for winding and unwinding a synthetic rope on a winch drum of a winch, comprising helically winding the rope with a substantially constant speed across a width of the drum in a back and forth manner to achieve a coiled state of the winch which comprises several layers of helically wound rope on the winch drum in which individual windings of the rope in each of the several layers on the winch drum have a spacing therebetween of at least 0.5 times a diameter of the rope.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Humberson	US 2,497,220	Feb. 14, 1950
Teichert	US 2009/0267038 A1	Oct. 29, 2009

REJECTION

Claims 1–5 and 8–19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Teichert and Humberson.

OPINION

The claims are argued as a group, for which claim 1 is representative. The Examiner relies on Teichert for the basic method recited, with the exception of the particular spacing between individual windings of rope—“at least 0.5 times a diameter of the rope.” Final Act. 3. According to

Appellants' Specification a minimum¹ rope spacing of 0.5 times the diameter of the rope minimizes the chances of the rope slipping and/or burying. Spec. 2. The Examiner turns to Humberson as teaching an approximate spacing equal to the rope diameter between successive windings of the rope. Final Act. 3 (citing Humberson Fig. 2). The Examiner found that such spacing would prevent chafing and twisting (*id.* (citing Humberson col. 1, ll. 4–9, 29–34)) and concluded that, for that reason, it would have been obvious to employ a spacing of “at least 0.5 times a diameter of the rope” in Teichert’s winch. Final Act. 3–4.

Appellants attack the Examiner’s motivation to combine the teachings of Teichert and Humberson, alleging that one skilled in the art would not view the teachings of Humberson relating to dynamic rope windings on a cathead, and problems associated therewith, as relevant to the a statically wound winch such as that of Teichert. Br. 5–9. Appellants also contend that, the relevance of Humberson aside, one cannot extract exact dimensions, a ratio in particular, from Humberson’s disclosure. Br. 7–9.

It is important to recognize that Teichert already discloses at least some spacing between adjacent windings in each layer. Final Act. 3 (citing Teichert Fig. 4); Ans. 6. The spacing depicted in Figure 4 of Teichert would appear to be in the neighborhood of 0.5 times the diameter of the rope. However, as both Appellants and the Examiner recognize, Teichert does not provide any specific guidance concerning this particular dimension. Teichert does expressly state that the diameter of the groove 34 containing the line 6 is 10–20% larger than the diameter of the line 6. Teichert ¶ 57.

¹ Spacing at 0.5 times the diameter is the lowest of several exemplary spacings, with the largest being six times the diameter and the preferred being equal to the diameter. Spec. 5:28–34.

Teichert illustrates some amount of diametrical difference between the groove 34 and the rope 6 but Teichert does not indicate how much is illustrated. *Id.* at Fig. 4. Teichert also illustrates additional spacing between the grooves (at the lead line for reference numeral 32), but does not discuss any dimensions of that spacing. *Id.*

Deducing information from patent drawings is a balancing act: On the one hand features depicted in the Figures cannot be ignored even if those features are not discussed. On the other hand, the familiar rule is that, unless otherwise stated, patent drawings are not typically drawn to scale. *See In re Mraz*, 455 F.2d 1069, 1072 (CCPA 1972) (“Patent drawings are not working drawings * * *’ However, we did not mean that things patent drawings show clearly are to be disregarded.”) (citations omitted).

The Examiner turned to Humberson as more clearly depicting a particular spacing that would sufficiently serve to discourage abrasion between adjacent windings of the rope and fall within the range recited. Final Act. 3 (citing Figure 2); Ans. 6. Appellants argue, and the Examiner recognizes, that Humberson does not discuss a specific dimension or ratio of spacing to rope diameter. The description associated with the cited figure indicates that helical coils 21 are of the requisite resiliency and define a spiraling channelway 22, the spaces of which are “regulated, according to the size of the rope used.” Col. 2, ll. 39–52. Thus, the coils 21 will always occupy, and therefore dictate the size of, the space between the windings. Figure 2 of Humberson thus fairly provides a teaching that one skilled in the art would understand as using a rope having a diameter similar in size to the coils 21, and therefore the spacing, between rope windings 17.

The Examiner has the better position concerning the relevance of Humberson, or catheads generally, to winches in which multiple layers of

windings accumulate on the reel. As the Examiner correctly points out, both devices are similar in structure and function:

Both inventions involve a specially designed cylindrical drum which is designed to engage a rope in order to impart a force to an object at an end of the rope. Both inventions space adjacent windings of the rope (about the drum) from each other in a longitudinal direction of the drum.

Ans. 3.

The main difference is whether the rope is continually fed by an operator who may dynamically adjust the tension, thereby allowing slippage, or allowed to autonomously accumulate in multiple layers. Considering both the similarities and differences, and that there are more of the former, we cannot agree with Appellants (Br. 5–7) that a skilled artisan would consider teachings relating to catheads, and the problems associated therewith, as inapplicable to winches or hoists having a fixed line wound in multiple layers.

More specifically, we cannot agree with Appellants (Br. 6–7) that “chafing” would not be a concern in Teichert’s hoist. *See* Final Act. 3; Adv. Act. 2. As the Examiner correctly points out, Teichert expressly discusses concerns regarding line abrasion, stating, “high-tech line 6, may be sensitive to e.g. abrasive, rubbing or otherwise harmful contact with other parts.” This particular statement, and protective means 62 (*see* Ans. 3–4 (citing Teichert para. 64)), may be specifically directed toward protecting against abrasion with componentry other than the rope itself. Br. 8. However, it would nonetheless be apparent to one skilled in the art that abrasion, rubbing or otherwise harmful contact with the rope should be avoided whatever the source—including adjacent windings. A cathead, which may allow rope slip

both along the axis of the rope and the axis of the drum, may be more susceptible to abrasive wear from adjacent windings. However, the fact that catheads may be more susceptible to such problems would encourage, rather than discourage, the skilled artisan to look to catheads when addressing wear issues in other types of winding devices.

Lastly, Appellants argue that even if Humberson discloses a spacing, Humberson discloses just that and not a particular ratio of spacing and rope diameter. As the Examiner points out, even if a ratio per se is not recognized as the critical variable in the prior art, employing the specific teachings of the references would have yielded the claimed subject matter. Ans. 5–6. To reject a claim under § 103(a) the Examiner must demonstrate that the claimed subject matter would have been obvious, not the particular methodology used to arrive at that subject matter.

For the foregoing reasons we sustain the Examiner’s rejection.

DECISION

The Examiner’s rejection is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED